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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Koji Okamoto

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10/31/2005

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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/888,531	Applicant(s) OKAMOTO, KOJI	
	Examiner Qutub Ghulamali	Art Unit 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/10/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/04/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgment

1. This Office Action is responsive to the Amendment filed on 08/10/2005.
2. Applicant's arguments filed 08/10/2005 have been fully considered but they are not persuasive. Details of examiner's response follows:

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchwald (US Patent No. 5,757,857) in view of Kazawa et al (US Patent No. 5,123,030), and further in view of Brouwer (US Patent 4,453,084).

Regarding claim 1, Buchwald discloses (figs. 1, 3, 4, 10), a clock recovery circuit comprising:

a clock generation part (61) for generating a clock signal (col. 7, lines 13-18);

a phase error detection part (78, 80, 82, 84) for detecting a phase error of said input signal (data in) with respect to said clock signal (col. 8, lines 10-16; col. 9, lines 61-67);

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a control part (58) for controlling based on an output of said phase error detection part, an oscillation frequency of said clock generation part so that said phase error becomes zero (col. 5, lines 36-50; col. 7, lines 13-18; col. 8, lines 10-16). The difference between Buchwald and the claimed invention is lack of explicit showing of phase error estimation, cross detection, pattern detection of a reproduction (input) signal and a selection part for selecting.

Kazawa in a similar field of endeavor, discloses (figs. 1-3, 5), a cross-detection part (2), whereby the zero cross timings 101 (fig. 6) are extracted, a phase error estimation part (55, 80) for estimating based on timing signal (col. 11, lines 36-48, 50-67), a pattern detection part (pattern selector 8, cooperatively with gate 60 and discriminator 7), delivers value 121 (fig. 11) in synchronism with the clock pulses 120 (col. 7, lines 65-68; col. 8, lines 1-8, 34-36; col. 11, lines 36-47, 51-67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include in the circuit of Buchwald, embodiments highlighted above, so as to allow recovery of correct signal information as taught by Kazawa. The Buchwald and Kazawa combination though discloses a selection part (5, 10), it, however, does not explicitly disclose selecting according to the detected variation pattern whether the estimated phase error is output to the control part. Brouwer in a similar field of endeavor discloses:

a selection part (figs. 3A, 8; elements 112, 125) for selecting, according to said detected variation pattern (183), whether said estimated phase error is output to said control part (col. 8, lines 45-67; col. 9, lines 1-66, 67-68; col. 10, lines 1-11). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a selection circuit for selecting according to detected variation pattern a signal as taught by Brouwer in the circuit of Buchwald and Kazawa, so as to achieve proper clock recovery from the reproduction signal.

Response to Arguments

5. Applicant's arguments, pages 2-4, filed 08/10/2005, have been fully considered but they are not persuasive. Applicant (s) traverses the rejection by mainly arguing that the references cited in the office action of May 10, 2005, fail to disclose the limitations of claim 1. In particular, the applicant's argument is directed to the selection circuit of Brouwer that according to the applicant merely develops a blocking signal. However, the examiner respectfully disagrees:

1. In response to applicant's argument with reference to claim 1, in the selection circuit of Brouwer, the block is made to detect the proper sample patterns entering the selection circuit 125, the block is promptly removed at a predetermined time to complete steering correction for selection as clearly delineated (see col. 9 lines 67-68; col. 10, lines 1-11, 33-42, 56-68). The pattern selection process is further disclosed with reference to figs. 4B and 7, wherein the pattern detection circuit in conjunction with dual pulse detector 112, provides the signal 182 from pattern line detector 183, produces an improved signal on line 131 that is feed to direction selection circuit 125. The applicant further argues the proposed combination of Buchwald-Kazawa-Brouwer as improper to which the examiner respectfully would like to draw applicants attention to - When an obvious determination or motivation to combine two or more references, there must be some suggestion or motivation to combine the references. See *In re Rouffet*, 149 F. 3d 1350, 1355, 47 USPQ 2d 1453, 1456 (Fed. Cir. 1998). The suggestion to combine may be found in explicit or implicit teachings within the reference themselves, from the ordinary

knowledge of those skilled in the art, or from the nature of the problem to be solved. See *id.* At 1357, 47 USPQ 2d at 1458. Moreover, as long as some motivation or suggestion to combine the references is provided by the prior art taken as a whole, the law does not require that the references be combined for reasons contemplated by the inventor. See *In re Dillon*, 919 F. 2d 688, 693, 16 USPQ 2d 1897, 1901 (Fed. Cir. 1990) (en banc), cert. Denied, 500 U.S. 904 (1991) and *In re Beattie*, 974 F. 2d 1309, 1312, 24 USPQ 2d 1040, 1042 (Fed. Cir. 1992).

Thus, as stated by the examiner, the advantages described by Brouwer would have motivated one of ordinary skill in the art to employ pattern detection and selection to select signal patterns in the clock recovery and timing extraction system of Buchwald-Kazawa combination.

Based on the information disclosed in the reference arts the examiner therefore, considers the reference cited reads on the claim making this argument mute.

Based on the above rational, it is believed that the limitations of claim 1, include features which are similar to those discussed above in connection with claim 1 is met by reference to Buchwald (US Patent No. 5,757,857) and Kazawa et al (USP 5,123,030) and further in view of Brouwer (USP 4,453,084) related arts, as disclosed in the instant application. Therefore the rejection to claim 1 is still maintained.

Allowable Subject Matter

7. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.

~~May 5, 2005~~
10/27/05


JEAN B. CORRIELUS
PRIMARY EXAMINER

10-27-05